

# EXHIBIT 7

**Exhibit G - U.S. Patent No. 9,198,042 (“’042 Patent”)**

Accused Instrumentalities: smartphones, basic phones, tablets, laptops, and hotspot devices sold (including those sold in bundles with data plans) or used by Verizon in conjunction with Verizon’s servers, hardware, software, and services leased, owned, supported, and/or operated by Verizon comprising Verizon’s wireless network services, and all versions and variations thereof since the issuance of the asserted patent.

**Claim 1**

Issued Claim(s)	Public Documentation
1. A method comprising:	To the extent the preamble is limiting, Verizon’s Accused Instrumentalities practice the steps of a method as set forth in the limitations below.
[1a] receiving, over a service control link, a report from a wireless end-user device, the report comprising information about a device service state;	The Accused Instrumentalities comprise receiving, over a service control link, a report from a wireless end-user device, the report comprising information about a device service state. Verizon offers telecommunications service plans to customers that are provided through various network elements such as telecommunications base stations and cell sites, edge servers, and other telecommunications servers. Verizon provides various network service plans to customers for purchase, including through the Verizon.com website as well as through Verizon-provided services such as its pre-paid mobile service category, Total By Verizon. <i>See, e.g.:</i>

<https://www.verizon.com/sales/digital/plans/popularplan.html?line=newLine1&mtnFlow=P>

<https://www.totalbyverizon.com/plans>

“bring” to the Verizon network. *See, e.g.:*

All

Free phones

Samsung

Apple

Motorola

Google

Kyocera

Lowest price with trade-in offer

100 results

Sort by: Best Sellers

Filter


Brand

OS

Special Offers

In Store Pickup

Price




Apple iPhone 14

Starts at \$22.22/mo for 36 months, 0% APR  
Retail price: \$799.99

☐ Compare


2.5K



Apple iPhone 14 Pro Max

Starts at \$30.55/mo for 36 months, 0% APR  
Retail price: \$1099.99

☐ Compare



Bring your own phone and get \$540.

With Unlimited Plus plan. [Details](#)

Learn more >

Page 4 of 47

Filter

Brand

OS

Special Offers


In Store Pickup

Price

Condition

Availability

Color




Samsung Galaxy S23 Ultra

Starts at \$33.33/mo for 36 months, 0% APR  
Retail price: \$1199.99

☐ Compare

♡




Apple iPhone 14 Plus

Starts at \$5.00/mo  
~~\$24.99/mo~~ Details for 36 months, 0% APR  
Retail price: \$899.99

☐ Compare

♡





Samsung Galaxy S21 FE 5G

Starts at \$0/mo  
~~\$16.66/mo~~ Details for 36 months, 0% APR  
Retail price: \$599.99


☐ Compare

♡





Get it free.




<https://www.verizon.com/smartphones/?sort=best-sellers>


Page 5 of 47


## Shop Hotspots and Internet Devices

6 results **Sort by:** Featured ▾




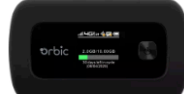
**Inseego MiFi X PRO 5G UW**  
★★★★☆ (304)  
Starts at \$9.72/mo for 36 months, 0% APR  
Retail price: \$349.99

☐ Compare 





**TCL LINKZONE 5G UW**  
★★★★☆ (79)  
Starts at \$8.33/mo for 36 months, 0% APR  
Retail price: \$299.99

☐ Compare 



**Verizon Orbic Speed Mobile Hotspot**  
★★★★☆ (638)  
Starts at \$2.22/mo for 36 months, 0% APR  
Retail price: \$79.99

☐ Compare 



**Already have a device you love?**  
Bring your own device to America's most reliable network. [Details](#)

**Learn more >**

<https://www.verizon.com/internet-devices/>

The Accused Instrumentalities use different service plans to provide service, for example, to mobile hotspot devices, mobile phones and tablets provisioned with an “unlimited” data plan, mobile phones and tablets provisioned with a prepaid plan, mobile phones and tablets which for which the associated subscriber account has reached its allotted data limit for the service period, and mobile phones and tablets which are specifically communicating with Verizon servers to purchase or increase data allotments (e.g., a Verizon “Data Boost”).

*See, e.g.:*





✓

Shop Why Verizon Support

Sign In

Search

Have a phone you love? Get \$540 when you [bring your phone](#).

# Data Boost FAQs

Learn what a Data Boost is, how your mobile data plan uses Data Boosts, what a Data Boost costs and how to get one.

- [How much does a data boost cost, and how much data do I get?](#)
- [How do I buy a data boost?](#)

## About Data Boosts

Expand All

1. What's a Data Boost?

A Data Boost is extra high-speed data the [Account Owner](#) or [Account Manager](#) can buy in My Verizon to help the account's lines avoid slower connection speeds.

Introduce

About Da

Using Da

Was this hel

[Shop](#)
[Why Verizon](#)
[Support](#)
[Sign in](#)

Have a phone you love? Get \$540 when you [bring your phone](#).

How the Data Boost is used depends on your plan:


Your plan	What buying a Data Boost does
Unlimited Plus and most previously-available Unlimited mobile phone plans.	When you add a <a href="#">5 GB Data Boost</a> to a line on your account, Mobile Hotspot 4G LTE / 5G <sup>①</sup> speed resumes for that line. When you go over your plan's data allowance, your general device use and Mobile Hotspot data may still be temporarily slower than other traffic in times of congestion.
Unlimited Welcome	Data Boosts aren't available unless you first buy the <a href="#">\$10/month 100 GB Mobile Hotspot perk</a> * You can then add a data boost to that perk if needed.
Go Unlimited**	Data Boosts aren't available.
Shared Data Plan – 5GB**, Shared Data Plan – 10GB**, The new Verizon Plan (shared data plans, e.g., S, M, L)**	<a href="#">Buy a Data Boost</a> to add 1 GB of 4G LTE / 5G <sup>①</sup> data for the account's general device use, including Mobile Hotspot.
Unlimited Plus and Essential, Plus, Pro & Premium plans for mobile hotspot devices	<a href="#">Buy a Data Boost</a> to add 5 GB more of 4G LTE / 5G <sup>①</sup> / 5G Ultra Wideband <sup>①</sup> data to your mobile hotspot device.
<a href="#">Prepaid monthly phone plans</a> ***	You can <a href="#">buy more high speed data</a> for your general device use, including Mobile Hotspot.

Introduction



**About Data Boosts**

Using Data Boosts

Was this helpful?



Shop Why Verizon Support

Sign in  Search 

Have a phone you love? Get \$540 when you [bring your phone](#). ⓘ

---

### 3. Does my Data Boost expire at the end of the month?

The Data Boost's expiration date depends on the plan you have:

- Unlimited plans - Your Data Boost expires at the end of your current bill cycle.
- Shared data plans\* - Any unused portion of your Data Boost is added to your pool of [Carryover Data](#) and expires at the end of the next bill cycle (e.g., a Data Boost bought during your June bill cycle expires at the end of your July bill cycle).
- Eligible prepaid plans - The expiration date is determined by the size of the Data Boost and the date of purchase:
  - 500 MB Data Boost expires after 30 days
  - 1 GB or 3 GB Data Boost expires after 90 days

To see your bill cycle dates, open [My Verizon](#) or the My Verizon app and choose Bill from the top menu.

Data Boosts aren't available on Unlimited Welcome, Welcome Unlimited, Just Kids\*, Go Unlimited\*, prepaid unlimited plans and current prepaid data only plans.

\*These plans are no longer available to add to your account.

<https://www.verizon.com/support/data-boost-faqs/>

Verizon's network receives service plan information from devices which correspond to the subscriber service plan associated with that wireless end-user device, which is a report comprising information about a device service state. For example, Verizon's network receives an attach request, bearer resource allocation request, bearer resource modification request, or PDN connectivity request from a wireless end-user device (UE), which includes a report comprising information about the UE's service state such as UE network capability, UE status, and protocol configuration options (PCO):

Table 8.2.4.1: ATTACH REQUEST message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 9.2	M	V	1/2
	Security header type	Security header type 9.3.1	M	V	1/2
	Attach request message identity	Message type 9.8	M	V	1
	EPS attach type	EPS attach type 9.9.3.11	M	V	1/2
	NAS key set identifier	NAS key set identifier 9.9.3.21	M	V	1/2
	EPS mobile identity	EPS mobile identity 9.9.3.12	M	LV	5-12
	UE network capability	UE network capability 9.9.3.34	M	LV	3-14
	ESM message container	ESM message container 9.9.3.15	M	LV-E	5-n
19	Old P-TMSI signature	P-TMSI signature 9.9.3.26	O	TV	4
50	Additional GUTI	EPS mobile identity 9.9.3.12	O	TLV	13
52	Last visited registered TAI	Tracking area identity 9.9.3.32	O	TV	6
5C	DRX parameter	DRX parameter 9.9.3.8	O	TV	3
31	MS network capability	MS network capability 9.9.3.20	O	TLV	4-10
13	Old location area identification	Location area identification 9.9.2.2	O	TV	6
9-	TMSI status	TMSI status 9.9.3.31	O	TV	1
11	Mobile station classmark 2	Mobile station classmark 2 9.9.2.4	O	TLV	5
20	Mobile station classmark 3	Mobile station classmark 3 9.9.2.5	O	TLV	2-34
40	Supported Codecs	Supported Codec List 9.9.2.10	O	TLV	5-n
F-	Additional update type	Additional update type 9.9.3.0B	O	TV	1
5D	Voice domain preference and UE's usage setting	Voice domain preference and UE's usage setting 9.9.3.44	O	TLV	3
D-	Device properties	Device properties 9.9.2.0A	O	TV	1
E-	Old GUTI type	GUTI type 9.9.3.45	O	TV	1
C-	MS network feature support	MS network feature support 9.9.3.20A	O	TV	1
10	TMSI based NRI container	Network resource identifier container 9.9.3.24A	O	TLV	4
6A	T3324 value	GPRS timer 2 9.9.3.16A	O	TLV	3
5E	T3412 extended value	GPRS timer 3 9.9.3.16B	O	TLV	3
6E	Extended DRX parameters	Extended DRX parameters 9.9.3.46	O	TLV	3
6F	UE additional security capability	UE additional security capability 9.9.3.53	O	TLV	6
6D	UE status	UE status 9.9.3.54	O	TLV	3
17	Additional information requested	Additional information requested 9.9.3.55	O	TV	2

**Table 8.3.8.1: BEARER RESOURCE ALLOCATION REQUEST message content**

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 9.2	M	V	1/2
	EPS bearer identity	EPS bearer identity 9.3.2	M	V	1/2
	Procedure transaction identity	Procedure transaction identity 9.4	M	V	1
	Bearer resource allocation request message identity	Message type 9.8	M	V	1
	Linked EPS bearer identity	Linked EPS bearer identity 9.9.4.6	M	V	1/2
	Spare half octet	Spare half octet 9.9.2.9	M	V	1/2
	Traffic flow aggregate	Traffic flow aggregate description 9.9.4.15	M	LV	2-256
	Required traffic flow QoS	EPS quality of service 9.9.4.3	M	LV	2-14
27	Protocol configuration options	Protocol configuration options 9.9.4.11	O	TLV	3-253
C-	Device properties	Device properties 9.9.2.0A	O	TV	1
33	NBIFOM container	NBIFOM container 9.9.4.19	O	TLV	3-257
7B	Extended protocol configuration options	Extended protocol configuration options 9.9.4.26	O	TLV-E	4-65538
5C	Extended EPS QoS	Extended quality of service 9.9.4.30	O	TLV	12

**Table 8.3.10.1: BEARER RESOURCE MODIFICATION REQUEST message content**

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 9.2	M	V	1/2
	EPS bearer identity	EPS bearer identity 9.3.2	M	V	1/2
	Procedure transaction identity	Procedure transaction identity 9.4	M	V	1
	Bearer resource modification request message identity	Message type 9.8	M	V	1
	EPS bearer identity for packet filter	Linked EPS bearer identity 9.9.4.6	M	V	1/2
	Spare half octet	Spare half octet 9.9.2.9	M	V	1/2
	Traffic flow aggregate	Traffic flow aggregate description 9.9.4.15	M	LV	2-256
5B	Required traffic flow QoS	EPS quality of service 9.9.4.3	O	TLV	3-15
58	ESM cause	ESM cause 9.9.4.4	O	TV	2
27	Protocol configuration options	Protocol configuration options 9.9.4.11	O	TLV	3-253
C-	Device properties	Device properties 9.9.2.0A	O	TV	1
33	NBIFOM container	NBIFOM container 9.9.4.19	O	TLV	3-257
66	Header compression configuration	Header compression configuration 9.9.4.22	O	TLV	5-257
7B	Extended protocol configuration options	Extended protocol configuration options 9.9.4.26	O	TLV-E	4-65538
5C	Extended EPS QoS	Extended quality of service 9.9.4.30	O	TLV	12

Table 8.3.20.1: PDN CONNECTIVITY REQUEST message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 9.2	M	V	1/2
	EPS bearer identity	EPS bearer identity 9.3.2	M	V	1/2
	Procedure transaction identity	Procedure transaction identity 9.4	M	V	1
	PDN connectivity request message identity	Message type 9.8	M	V	1
	Request type	Request type 9.9.4.14	M	V	1/2
	PDN type	PDN type 9.9.4.10	M	V	1/2
D-	ESM information transfer flag	ESM information transfer flag 9.9.4.5	O	TV	1
28	Access point name	Access point name 9.9.4.1	O	TLV	3-102
27	Protocol configuration options	Protocol configuration options 9.9.4.11	O	TLV	3-253
C-	Device properties	Device properties 9.9.2.0A	O	TV	1
33	NBIFOM container	NBIFOM container 9.9.4.19	O	TLV	3-257
66	Header compression configuration	Header compression configuration 9.9.4.22	O	TLV	5-257
7B	Extended protocol configuration options	Extended protocol configuration options 9.9.4.26	O	TLV-E	4-65538

3GPP TS 24.301 v15.03

## Flows

There are three scenarios where the PCO value will be passed to the host:

- When a new PCO value has arrived on an activated connection
- When an app or service queries for the latest PCO value from the modem
- When a connection is bridged or activated for the first time and a PCO value already exists in the modem

For the first scenario, the modem should send an [NDIS\\_STATUS\\_WWAN\\_PCO\\_STATUS](#) notification to the OS indicating a new PCO value change whenever a new PCO value is received from the network, with the appropriate NDIS port number to represent the corresponding PDN. To avoid draining the battery unnecessarily, the modem should avoid noisy notifications, as described in [Modem behavior with Selective Suspend and Connected Standby](#).

For the second scenario, when an app or service queries for PCO value from the modem on an activated PDN connection, the host will send the modem an [OID\\_WWAN\\_PCO](#) query request to read the latest cached PCO value in the modem.

For the third scenario, when a connection is activated or bridged on the host, the modem should send an [NDIS\\_STATUS\\_WWAN\\_PCO\\_STATUS](#) notification when a PCO value already exists in the modem for the activated or bridged connection the host requested. The notification should be passed up from the corresponding NDIS port number of the PDN.

	<a href="https://learn.microsoft.com/en-us/windows-hardware/drivers/network/mb-protocol-configuration-options-pco-operations">https://learn.microsoft.com/en-us/windows-hardware/drivers/network/mb-protocol-configuration-options-pco-operations</a>
<p>[1b] determining, based on the report, that a particular service policy setting of the wireless end-user device needs to be modified, the particular service policy setting being stored in a protected partition of the wireless end-user device, the protected partition configured to deter or prevent unauthorized modifications to the particular service policy setting, the particular service policy setting being associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network, the particular service policy setting configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network; and</p>	<p>The Accused Instrumentalities comprise “determining, based on the report, that a particular service policy setting of the wireless end-user device needs to be modified, the particular service policy setting being stored in a protected partition of the wireless end-user device, the protected partition configured to deter or prevent unauthorized modifications to the particular service policy setting, the particular service policy setting being associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network, the particular service policy setting configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network.”</p> <p>Examples of such service policy settings on the wireless end-user device include, for example, APN access settings and service plan settings stored on the wireless end-user device, including for example in an encrypted partition of the device or in an encrypted SIM card. Such service policy settings are configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network, insofar as the policies are used by Verizon to determine the levels of service that are to be provided to the wireless end-user device.</p> <p>Carrier configuration information (which is service profile information) on a given wireless end-user device is secured within the device through the use of privileges and other access settings, including through the use of matching signatures between the carrier settings and one stored with the SIM card information. <i>See, e.g.:</i> <a href="https://www.verizon.com/support/knowledge-base-212894/">https://www.verizon.com/support/knowledge-base-212894/</a></p>